

**Statement of
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Mr. Chairman and Members of the Committee, thank you for the opportunity to testify today on the subject of Bus Rapid Transit (BRT) and Other Bus Service Innovations.

History tells us that the means by which we travel will change, but public transit can be expected to remain an important mode of transportation in America. In the early 1800s, Americans relied on their own feet, horses, and buggies to get from one place to another. In the mid-nineteenth century, railroads began crossing the continent, and by the turn of the century, subways and streetcars became their urban equivalent. Although the automobile first appeared in the early 1900s, most Americans still depended on buses, streetcars, and subways for transportation until after World War II, when the highway network expanded, most urban streets were paved, and the car became an affordable transportation choice. The automobile is, in fact, a relatively recent arrival in the history of transportation.

Now, at the dawn of the 21st century, with traffic congestion, energy and environmental challenges, and the desire for greater independence and economic opportunity, we are witnessing the reemergence of public transportation as the mode of choice for many Americans. Key to this reemergence is continued innovation, as we develop new ideas and new technologies, and expand the number and scope of safe, fast, convenient, and reliable public transportation options.

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the Transportation Equity Act for the 21st Century (TEA-21) have played a critical role in the resurgence of public transportation in America. Among the most important provisions was shaping the New Starts program, as we know it today, to help growing communities plan and construct new permanent public transportation systems or expand those already in existence. When these laws were passed, transit “fixed guideway” systems – subways, light rail, commuter rail, trolleys – were envisioned as the options for communities to consider as they created the next New York subway, San Francisco trolley, or Chicago “el.” But in the few short years since TEA-21 was signed into law, a new option has emerged – Bus Rapid Transit – that does not necessarily require a fixed guideway. Continued public and private investment in the development of new public transportation technologies is certain to generate additional options in the coming years.

In my remarks today, I will discuss the success and potential of Bus Rapid Transit as we know it today, as well as the Administration's proposed changes for the New Starts program in the President's Fiscal Year 2004 budget and reauthorization of the surface transportation programs.

Bus Rapid Transit

Let me tackle the hardest question first: What is Bus Rapid Transit? This question is difficult because Bus Rapid Transit is not defined by a pre-determined set of physical characteristics. Fundamentally, it is a service – one that is fast, reliable, convenient, affordable, accessible, and aesthetically distinguishable from “regular” bus service.

Conventional urban bus operations bring to mind nondescript vehicles inching their way through congested city streets, delayed not only by other vehicles and traffic signals, but also by frequent and time-consuming stops to pick up and discharge passengers fumbling with coins as they board. Bus Rapid Transit systems, on the other hand, achieve their superior service levels by incorporating some or all of the following features:

- **Express service** with fewer bus stops, wider station spacing, and off-line boarding to shorten the amount of time spent at stations and improve travel time.
- **Vehicle tracking systems** that use satellites or roadside sensors and permit “next vehicle” information displays at stations, automated stop announcements for passengers, traffic signal priority, and enhanced safety and security.
- **Off-board fare collection systems**, that may include passes, pre-purchased tickets, or “smart cards” that rely on microchip technology to speed fare collection and reduce boarding time.
- **Specialized roadways** that may include fixed guideways (such as expressways, busways, and streets designated for the exclusive use of buses) or non-fixed guideways (such as lanes barrier-segregated from other traffic by physical barriers, exclusive bus lanes on normal roadways, or even mixed traffic lanes that incorporate features like off-lane boarding or signal prioritization).
- **Improved vehicles** with low floors, wide aisles, and distinctive design, color or graphics. Low-floor buses permit easy entrance and exit, comply with the requirements of the Americans with Disabilities Act (ADA) of 1990, and reduce the boarding time for persons using mobility aids. More and wider doorways also facilitate the rapid entry and exit of passengers, as does a well-designed interior space. Along with distinctive design, these features all help overcome negative perceptions of buses.
- **Vehicle control systems** that permit precision docking and level passenger boarding without causing damage to the vehicle's tires or structure. Vehicles can be equipped with sensors or mechanical systems to control the height, location along the platform, and distance from the platform.

At the high-end of the spectrum, BRT combines dedicated roadways, modern stations, high-tech vehicles, and frequent service that are characteristic of rail systems, but at a lower cost. BRT, however, also offers promise as a means to create real improvements in traditional bus service. In fact, the technological advances associated with Bus Rapid Transit are already being used to improve “regular” bus service. For example, automated vehicle location technologies, such as satellite or roadside sensors that track the location of vehicles, can be used to control traffic signals and give priority to transit vehicles. The signal priority system of the Los Angeles Metro Rapid Bus system along Wilshire Boulevard, for example, has reduced transit travel times by nearly 30 percent, and total bus ridership is up by almost 40 percent. Today, the Rapid Bus System in Los Angeles carries 45,000 passengers daily – and that is in addition to the 45,000 daily riders on the “local” bus that travels the same corridor. The system has been so successful that the Los Angeles County Metropolitan Transportation Authority now operates a total of 65 route miles along four corridors, and plans to add another twenty-two corridors by 2008, at a rate of four per year.

Funding Sources for Bus Rapid Transit

Bus operation planning is generally the responsibility of the local transit operators, in cooperation with regional multimodal transportation planning agencies, such as metropolitan planning organizations (MPOs). A variety of service improvement strategies -- including many improvements associated with Bus Rapid Transit -- may be funded through a number of existing Federal Transit Administration (FTA) programs. These include the Urbanized Area formula program, Non-Urbanized Area formula program, and the Bus and Bus Facilities major capital investment program. Communities may also use Congestion Mitigation and Air Quality Improvement Program (CMAQ) and Surface Transportation Program (STP) funds (often referred to as “flex-funds”).

When a community determines through its multimodal transportation planning process that a major transportation capital investment may be required to meet the mobility needs in a given corridor, it may decide to pursue the development, funding, and implementation of a New Starts project. The New Starts project planning and development process, as you know, is established in law, regulation, and guidance. It includes alternatives analysis, preliminary engineering, and final design, and it culminates in a full funding grant agreement for meritorious projects that rate well on the project justification and financial criteria established in law for all New Starts projects.

FTA strongly encourages every community that is interested in New Starts project funding to consider and evaluate the costs and benefits of Bus Rapid Transit, along with other fixed-guideway options that are currently eligible under the New Starts program. Mobility improvements, environmental impacts, operational costs, cost-effectiveness, and economic impacts should all be assessed when planners and local decision makers compare and select a locally-preferred alternative for a corridor. Although a 2001 General Accounting Office (GAO) report comparing systems in four cities, found that BRT systems have lower capital costs, comparable operating costs, and greater flexibility

than light rail systems, relatively few communities have selected Bus Rapid Transit as their locally-preferred alternative.

Currently, the New Starts pipeline has five Bus Rapid Transit projects in preliminary engineering and one in final design. To date, three Full Funding Grant Agreements have been executed for fixed-guideway bus projects in Pittsburgh, Boston, and Houston. All of these projects were initiated before the current concept of BRT took form.

- In Pittsburgh, the Port Authority of Allegheny County is constructing a five-mile busway to connect rapidly growing markets in the corridor between the City of Pittsburgh and Pittsburgh International Airport. The project includes the rehabilitation of an abandoned light rail tunnel for use by buses, six stations, and six park-and-ride lots. Portions of this system are already open, and it is expected to begin full service through the Wabash Tunnel in December 2004.
- In Boston, the South Boston Piers Transitway Project will link the South Boston area with regional mass transit services in downtown Boston. It consists of a one-mile tunnel and surface bus operations with three stations. Now under construction, this project is also expected to begin service in December 2004.
- And in Houston, the Regional Bus project is largely operational and is scheduled for full revenue operations in December 2005, with new facilities, intelligent transportation systems technology, transit streets and HOV lanes.

The GAO report suggests three reasons for the relatively few BRT New Starts projects: (1) Bus Rapid Transit is a relatively new concept, and many projects, especially those that have reached the final design and full funding grant agreement stage, were chosen before BRT, as we know it today, existed; (2) there is a perception among local decision-makers that the public prefers rail service to bus service; and (3) some Bus Rapid Transit projects do not fit the fixed-guideway, or exclusive right-of-way, requirements of the New Starts program and thus are not eligible for funding consideration.

FTA is committed to helping communities overcome these perception and information barriers by undertaking a major effort to: promote the benefits of Bus Rapid Transit service elements; compile and share information about successful Bus Rapid Transit projects in the U.S. and abroad; and provide technical assistance, guidelines, and encouragement to community and transit leaders who are interested in Bus Rapid Transit as a means to improve their regular bus service or respond to transportation needs in a corridor that require a major capital investment. In addition, the Administration is proposing, through the President's Fiscal Year 2004 Budget and its upcoming surface transportation reauthorization legislation, several changes in the New Starts program that will permit non-fixed guideway Bus Rapid Transit and other new, lower-cost technologies to receive New Starts funding.

At the same time, it is important to understand that Bus Rapid Transit will not be the right solution for every community. Considerations like population density, the

existence of exclusive rights-of-way, centralized employment centers, and the impact of topography on system design and construction costs may make light rail, for example, more cost-effective than Bus Rapid Transit in a particular community.

Promoting Bus Rapid Transit

In 1999, FTA formed the BRT Consortium, consisting of communities interested in implementing Bus Rapid Transit. Seven of the 18 consortium members now have Bus Rapid Transit in their communities: Los Angeles, Miami, Honolulu, Boston, Pittsburgh, Chicago, and Charlotte. The remaining consortium members all expect to initiate BRT revenue operations within the next 4 years. As you may know, Eugene, Oregon, is a member of the consortium, and is represented at today's hearing by Ken Hamm, General Manager of the Lane Transit District. Since 1999, consortium members have met nine times to discuss specific topics and explore solutions to the challenges they face. Any community that may be interested in a particular topic or in learning about BRT generally is welcome to attend consortium meetings. In fact, FTA maintains a mailing list of individuals and organizations that have expressed interest in BRT, and sends notices of meeting, workshops and new publications to them.

FTA also provides technical assistance to consortium members, helping them to address specific development and operational challenges. In addition, eleven of the Consortium members, designated as "demonstration projects," have received grants to participate in consortium activities, collect data, and conduct BRT program evaluations. The information collected will be used to analyze and compare the costs and benefits of specific BRT features, including ridership, capacity, travel-time savings, and operating costs, and will help FTA prepare guidelines and tools for communities to use as they examine alternatives and options to improve mobility.

Other activities sponsored by FTA's BRT research and technical assistance program include:

- The development and delivery of a National Transit Institute workshop entitled "Exploring the Potential of Bus Rapid Transit," which offers transportation professionals and decision-makers an introduction to BRT, including considerations in planning infrastructure and facilities, service planning, vehicle selection, technology applications, and implementation and institutional issues.
- The development and execution of a BRT webpage on the FTA public website, which features information about current BRT projects throughout the country, a calendar of upcoming BRT workshops and events, a BRT primer, copies of FTA-sponsored publications, and video clips and photos of BRT systems in operation.
- A BRT vehicle design competition, which was intended to generate interest in and awareness of the desirable characteristics of future potential BRT vehicles and systems. Four designs received top honors, and 18 additional awards were given for a variety of innovative ideas and vehicle design concepts. Winning entries are also featured on FTA's BRT webpage.

- A series of BRT publications, including BRT Project Evaluation Guidelines, An Evaluation of the Port of Allegheny's West Busway, BRT Vehicle Demand and Supply Analysis, Bus Rapid Transit and the American Community, and An Analysis of FTA's Bus Testing Program with Respect to Bus Rapid Transit Vehicles, as well as various BRT Workshop Proceedings.
- Funding and technical assistance to establish the BRT Institute to conduct research and act as a BRT information clearinghouse. The Institute is a partnership between the Center for Urban Transportation Research in Tampa, Florida, and Partners for Advanced Transit and Highways in Berkeley, California.
- The creation of a computer modeling tool, now in final stages of development, to assist transportation planners in determining the most appropriate BRT elements to address traffic conditions and ridership demand.
- In conjunction with the Transportation Research Board of the National Academy of Sciences, the publication of "Case Studies in Bus Rapid Transit" and the development of BRT planning and implementation guidelines.
- International meetings and technical tours have been conducted with transit officials in Italy, Switzerland, France, and Britain to introduce U.S. manufacturers to overseas markets and gather information about successful BRT systems that may be emulated in U.S. cities. As a result, representatives of Irisbus and Phileas Bus, which manufacture buses used in France and the Netherlands, are engaged in discussions with American bus manufacturers regarding potential partnership opportunities.

Additional Bus Rapid Transit systems outside the U.S. that may offer significant educational and market development opportunities operate in Curitiba, Brazil; Ottawa, Canada; and Bogota, Columbia. In operation since 1974, the Curitiba Bus Rapid Transit system – often called the "surface subway" - is widely considered the world's pre-eminent example of Bus Rapid Transit. It offered a revolutionary solution for linking downtown to the neighborhoods through exclusive traffic lanes, combining an "express bus only" middle lane with two outer lanes for slower traffic. Curitiba's regional integrated transport network consists of 58 kilometers of exclusive bus lanes, over 2000 buses, and 233 "tube stations" where passengers prepay their fare and board buses via ramps.

Ottawa's Transitway, which was built in stages between 1978 and 1996, is a 19-mile bus-only road that goes to the central business district, where it connects to exclusive bus lanes on city streets. Over 75 percent of passenger bus trips are made using the Transitway. The Transitway was constructed largely on rail rights-of-way and was designed for possible conversion to rail should future ridership warrant. The main Transitway routes use articulated buses with proof-of-payment fare collection to speed boarding; only one-quarter of the riders pay with cash.

Another success story that FTA is studying is the Transmilenio bus system in Bogota, Columbia. This innovative 38-kilometer bus system carries 600,000 passengers a day. Bogota plans to expand the system to 388 kilometers by 2016.

Proposed Changes in the New Starts Program

As noted earlier, the GAO found that the development of Bus Rapid Transit systems was inhibited by the fact that BRT projects do not always fit the fixed-guideway, or exclusive right-of-way, requirements of the New Starts program. The President's Fiscal Year 2004 Budget not only proposes to grow the New Starts program by \$300 million, but also incorporates our surface transportation reauthorization proposal to expand eligibility for New Starts funding to include new or expanded non-fixed guideway corridor-based transportation projects.

We believe this change will help promote the development of commonsense transit solutions, as communities consider major capital investments to solve mobility problems in transportation corridors. As my testimony today has illustrated, with today's technology – particularly Bus Rapid Transit – the presence of a fixed guideway is not always required to create a cost-effective major new or expanded corridor system. Currently, however, by making the inclusion of a fixed guideway a fundamental requirement for a New Starts grant, we encourage communities to consider only these more expensive alternatives. Further, some small and medium-sized communities that would benefit enormously from the creation of new transit options simply cannot generate enough new riders or travel-time savings to justify a more expensive fixed guideway system.

I want to assure the Committee that, as we develop implementation guidelines for this change, we will work closely with Congress and with all of our stakeholders. We have no interest in opening the New Starts pipeline to what might be characterized as simply the purchase of “fancy” buses or normal bus system expansions; projects must involve the creation of a new system that provides substantially enhanced levels of service to a corridor or the extension of a current corridor system. We believe that policies and guidance can be developed that will effectively preserve the intent of the New Starts program, even as we make room for new cost-effective solutions. I would also like to mention, however, that we have intentionally omitted reference to Bus Rapid Transit in our legislative proposal. As we have learned, technology changes rapidly, and it is important that we preserve our ability to incorporate future cost-effective transportation innovations into the New Starts program.

In the context of the proposed eligibility change, we are proposing two additional modifications to the New Starts program. As you know, under current law, any project requesting less than \$25 million in New Starts funding is exempt from the rigorous New Starts evaluation and ratings process. Unfortunately, experience has demonstrated that early project estimates can be inaccurate. On numerous occasions, project sponsors who intend to seek funds without participating in the project evaluation process suffer serious set-backs when they determine that they do, in fact, require more than \$25 million in Section 5309 New Starts funding. Moreover, small projects that proceed without adequate attention to ridership and financial projections may find themselves in financial difficulty. An elimination of this exemption would deter project sponsors from dividing corridor transportation systems into artificially small segments to avoid the New Starts

evaluation process. Therefore, we propose to eliminate the \$25 million exemption in the New Starts program. Under our proposal, any project that seeks Federal New Starts funds will be required to participate in the New Starts evaluation and rating process.

At the same time, we recognize that the complexity of New Starts projects can vary considerably. Therefore we are proposing that projects requesting less than \$75 million be subject to a simplified New Starts process. We would utilize the same evaluation criteria established by Congress for projects seeking more than \$75 million in funding from New Starts that will focus on ensuring that all projects are merit Federal investment, but will accommodate the streamlined delivery of smaller projects.

Conclusion

Mr. Chairman, we believe that, taken together, these changes will help communities select the most cost-effective, commonsense transit solutions. Bus Rapid Transit can and should be one of the transportation options available to our growing communities. We believe that continued Federal investment in the development of this and other new transportation technologies holds enormous promise for America, and I want to thank you again for the opportunity to discuss this important subject with the Committee. I would be pleased to respond to any questions the Committee may have.